

ABSTRACT**INTERNAL COMBUSTION ENGINE**

- 5 A high thermal efficiency lean-burn spark-ignition two or four stroke engine operable
unthrottled suitable for vehicles using gasoline. It uses an indirect combustion chamber and
a transfer orifice aligned to produce a jet of air moving in helical swirl motion around the
chamber during the compression stroke. Fuel is injected into the chamber aimed into the air
jet to assist rapid vaporisation. The position and orientation of the fuel injector ensures that
10 fuel arrives near the spark plug even under idling conditions and the helical swirl flow
ensures the stratification of the ignitable mixture formed near the plug.